

Claims:

1. An electro-chemical method for cleaning the surfaces of metallic work pieces, in particular the surfaces in the region of welded seams, by using an electrode, wherein an insulating layer is arranged between the electrode and the work piece, and a voltage is applied between the work piece and the electrode and the insulating layer is impregnated with an electrolyte, characterized in that during the cleaning procedure, the electrode is set into vibrations with frequencies preferably in the ultrasonic range.

2. A cleaning method according to claim 1, characterized in that the electrode is set into vibrations in the frequency range of more than 20 kHz, preferably between 100 kHz and 2 MHz.

3. A cleaning method according to claim 1 or 2, characterized in that the vibration amplitude is changed.

4. An electrode (1) for electro-chemically cleaning the surfaces of metallic work pieces (2), in particular the surfaces in the region of welded seams, with a con-

necting terminal (4) for connection to an electric voltage source (5) and an insulating layer (7) to be impregnated with an electrolyte (8), characterized in that a means (9) for generating a vibration is provided.

5. A cleaning electrode according to claim 4, characterized in that the vibration generating means (9) is formed by an ultrasonics generator.

6. A cleaning electrode according to claim 4 or 5, characterized in that the vibration generating means (9) is arranged in the electrode (1).

7. A cleaning electrode according to claim 4 or 5, characterized in that the vibration generating means (9) forms part of the electrode (1).

8. A cleaning electrode according to claim 4 or 5, characterized in that the vibration generating means (9) is fastened to the electrode (1).

9. A cleaning electrode according to any one of claims 4 to 8, characterized in that a handle (12) is

provided which is mounted in a vibration-damping manner or which is provided with a vibration-damping layer (13).

10. A cleaning electrode according to any one of claims 4 to 9, characterized in that a layer (11) of elastic material is provided.

11. A cleaning electrode according to any one of claims 4 to 10, characterized in that a layer of carbon is provided.

12. A cleaning electrode according to any one of claims 4 to 11, characterized in that the insulating layer (7) is formed of a fabric, preferably a fiber-glass fabric.

13. A cleaning electrode according to any one of claims 4 to 11, characterized in that the insulating layer (7) is formed of nodules (14) or the like of plastics.

14. A cleaning electrode according to any one of claims 4 to 13, characterized in that a line (15) for

delivering the electrolyte (8) is provided.

15. A cleaning electrode according to any one of claims 10 to 14, characterized in that the feed line (15) contains a means for metering the electrolyte (8).

16. A cleaning electrode according to any one of claims 10 to 15, characterized in that a line for delivering additional components to the electrolyte (8) is provided.